Enhancing the Effective Resolution of Orbital Imaging Platforms via Energetic Light Funnels Composed of Structured Magnetons

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Introduction

Even given the ability to accurately evaluate the properties of a light wave using as few as three photons, the size of the mirror of an orbital imaging platform establishes a firm limitation upon the number of photons which may be captured.

Abstract

In the publication of 30 July 2024, it was proposed that data could be transmitted using magnetons broadcast along a narrow but curved pathway by employing magnetism-blocking metamaterials as well as energy-recycling metamaterials to enable incredibly intense magnetic fields to be used to generate an inductive effect at great range and in very limited areas whilst simultaneously overcoming the curvature of the Earth.

The same sort of curving, narrow projection of magnetism can be used to change the angular momentum of light given a sufficiently powerful pulse. Given the advent of power transmission by helical LASER, all of the needed energy could be beamed to the magneton emitter from the ground and relayed through a network of satellites with line-of-sight of the magneton satellite.

A standard imaging satellite aided by a companion satellite sitting just behind it (above it in terms of altitude) may be used to generate such a field. The emitter would be spherical and would feature a pair of circular gaps in the magnetism-blocking metamaterial (picture an indentation in a spherical ball of dough made by a circular cookie-cutter.) One such gap would be emplaced directly over the Magnetic North of the magnet, which would be oriented away from both the imaging satellite and the Earth. The second circular gap would be emplaced directly over the Magnetic South and would face directly toward the imaging satellite and the Earth.

The companion, magneton-generating satellite would be made to project this field; which would likely damage electronics should it bisect with any electronic component; around the imaging satellite without bisecting it. Any photons passing through the southern (returning) portion of the magnetic field would be pulled symmetrically in the direction of the imaging sensor despite their original trajectory taking them toward a point which would not cause them to pass near to the platform. This would take the shape of a convex cone which would narrow as it approaches the magneton-emitting companion satellite.

Conclusion

Virtual mirrors of several thousand feet in width may be created energetically using far less power than the system proposed in 17 November 2023. Although Structured Free Electron LASERs (SFELs) would be needed to in order to create functional mirror-accumulators for high-intensity LASER pulses (24 October 2023,) as only a redirection of the angular momentum of light is solicited in this use-case, a curved, two-dimensional magneton wall would be ideal for the application. In theory, the narrower the projection of the magneton field and the closer the field comes to the source of the light, the less energy would be needed to nudge errant photons in the direction of the sensor.